

Homework 25H
Completing the square

Name _____
Period _____ Date _____

Directions: Do only the EVENS

Find the value of c that makes the expression a perfect square trinomial.
Then write the expression as a square of a binomial.

1. $x^2 + 12x + c$

2. $x^2 + 50x + c$

3. $x^2 - 26x + c$

4. $x^2 - 18x + c$

5. $x^2 + 13x + c$

6. $x^2 - 9x + c$

7. $x^2 - 11x + c$

8. $x^2 + \frac{1}{2}x + c$

9. $x^2 - \frac{6}{5}x + c$

Solve the equation by completing the square. Round your solutions to the nearest hundredth, if necessary.

10. $x^2 + 6x = 1$

11. $x^2 + 4x = 13$

12. $x^2 - 10x = 15$

13. $x^2 + 8x = 10$

14. $x^2 - 2x - 7 = 0$

15. $x^2 - 12x - 21 = 0$

16. $x^2 + 3x - 2 = 0$

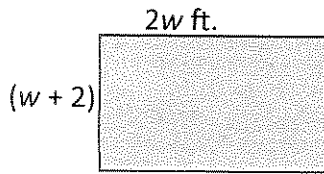
17. $x^2 + 5x - 3 = 0$

18. $x^2 - x = 1$

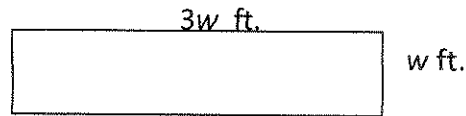
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- 1) Two fenced in backyards have the lengths and widths shown. The yards have the *same* area.



Backyard 1



Backyard 2

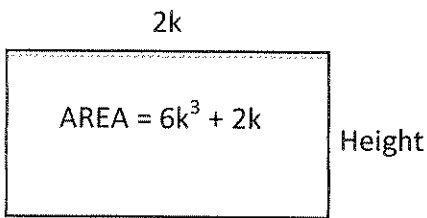
a) Write the SIMPLIFIED equation that relates the areas of the two backyards: _____

b) Find the length, width, and perimeter of each yard:

Length of Yard 1: _____ / Width of Yard 1: _____ / Perimeter of Yard 1: _____

Length of Yard 2: _____ / Width of Yard 2: _____ / Perimeter of Yard 2: _____

- 2) The rectangle has an area of $6k^3 + 2k$. Its length is $2k$. Find its height.

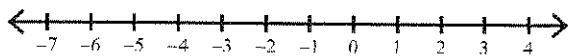


3) Solve: $16a^2 - 8a + 1 = 0$

4) Solve: $32 - 18m^2 = 0$

- 5) Solve and graph:

$8|4 + 4k| - 8 < 120$



- 6) For a floral arrangement class, Alicia has to create an arrangement of twigs and flowers that has a total of 9 objects. She has to pay for the twigs and flowers that she uses in her arrangement. Each twig costs \$1, and each flower costs \$3. If Alicia spends \$15 on the twigs and flowers, how many twigs did she use?

- A) 7
- B) 6
- C) 5
- D) 4
- E) 3